Success Snapshot for Media

Con Edison and New York City Set a Precedent for Connecting Solar Energy to Dense Urban Network Grids

The Department of Energy and the New York City Solar America City Initiative are working with one of the nation's largest utilities, Con Edison, to interconnect solar energy systems to New York City's complex electrical distribution grid system.

New York City has one of the oldest and most reliable grid systems in the U.S. In Manhattan, Queens, Brooklyn and the Bronx in particular, Con Edison operates a series of 'network grids' with extra safeguards designed to prevent power interruptions. The same features that make this system very reliable can also create challenges when trying to interconnect solar electric equipment. While many utilities have yet to allow customers to connect solar PV systems to network grids, New York City and Con Edison are working together and have found solutions that satisfy customers and the utility.

The New York City Solar America City Initiative, a partnership between the City University of New York, the New York City Economic Development Corporation, and New York City's Mayor's Office of Long Term Planning and Sustainability, has been driven by Department of Energy Solar America Cities funding. The city initially received approximately $200,000 in grants as well as technical assistance from solar experts at the National Renewable Energy Laboratory (NREL) to help increase urban solar energy use.

One of the goals of the Solar America Cities initiative is to reduce the barriers to the installation of solar systems on the nation's electric grid. Complex interconnection rules often pose an obstacle to customers wishing to install solar photovoltaic (PV) systems. With consumer interest in solar energy growing in New York City, the city was searching for a way to overcome the interconnection challenges and allow urban residents and businesses to go solar. A team of engineers from NREL and Con Edison developed guidelines for sizing PV systems and installing special equipment so that energy flowing from a PV system back to the grid would not jeopardize grid stability. This lays the groundwork for other utility companies across the country to follow suit.

According to Michael Coddington, senior engineer at NREL, "Most electric distribution systems are designed for one way power flow, from the central power plant out to the homes and businesses. When you introduce two-way power flow from the homes and businesses back to the grid, you have to make sure the proper systems are in place to handle that."

"We now know that we can interconnect PV systems to secondary network distribution grids and we have shown with proper analysis and standards, the PV systems can operate safely, efficiently and reliably," said John Mucci, vice president of engineering and planning for Con

SOLAR AMERICA CITIES™

Success Snapshot for Media

Edison. “We are encouraging Con Edison customers to find innovative ways to be energy efficient and provide clean, renewable energy while being connected to our grid,” said Mucci.

“Through their leadership, Con Edison has made solar energy a viable customer option, which is helping to build demand for solar in New York City”, said Jim Gallagher, senior vice president for energy policy at the New York City Economic Development Corporation.

New York City’s groundbreaking efforts have paid off. In October 2009, the Department of Energy announced a new $1M award to help the city and Con Edison study the interaction between solar systems and the grid more closely. In addition, in December 2009, the Department of Energy announced over $100M for ConEdison to deploy new smart grid technologies to enable better integration of renewable energy and energy efficiency equipment with the grid.

New York City and Con Edison are sharing their lessons learned with other cities across the United States. Utilities in cities like San Francisco and Denver are already working with PV systems integrators and allowing interconnection in some form onto their networks.

For more information on the work done in New York City or best practices for utilities to add PV systems to a network grid, please contact Jim Licko, GroundFloor Media, and he can connect you with the following individuals for interviews:

Hannah Muller or Charlie Hemmeline, U.S. Department of Energy, Solar America Cities
Kevin Lynn, Sentech, Inc., Solar Energy Technologies Program
Michael Coddington, National Renewable Energy Laboratory
Tria Case, City University of New York
Jim Gallagher, New York City Economic Development Corporation
John Mucci, Con Edison

Contact:
Jim Licko
Director
GroundFloor Media
Phone: (303) 865-8156
Mobile: (303) 883-4551
Email: jlicko@groundfloormedia.com